

2001P08878US01
60,426-381**IN THE CLAIMS:**

Please amend the claims as shown below.

1. (CURRENTLY AMENDED) A system for monitoring conditions within a tire comprising[[:]]:

a sensor assembly disposed within each tire of a motor vehicle,

a transmitter in communication with said sensor assembly to transmit a frequency shift keyed transmission indicative of current tire conditions;

a remote transmitter for actuating a remote keyless entry system, said remote transmitter emitting a amplitude shift keyed transmission to actuate a function of said keyless entry system;

a receiver assembly for receiving said frequency shift keyed transmission signal indicative of said current tire conditions and said amplitude shift keyed transmission single signal to actuate a function from said remote transmitter wherein said transmission indicative of current tire conditions includes an amplitude shift keyed wake-up signal for alerting said receiver assembly of an incoming frequency shift keyed transmission signal.

2-3. (CANCELLED)

4. (CURRENTLY AMENDED) The system of claim 1, wherein said receiver assembly includes an amplitude shift keyed receiver, and a frequency shift keyed receiver, said amplitude shift keyed receiver and said frequency shift keyed receiver are receivers selectively engaged to receive incoming signals in response to a predetermined triggering event.

5. (ORIGINAL) The system of claim 4, wherein said predetermined triggering event is the current speed of the motor vehicle.

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6. (CURRENTLY AMENDED) The system of claim 5, wherein said amplitude shift keyed receiver is engaged to receive incoming signals for speeds below a predetermined speed threshold of ~~the said~~ motor vehicle and said frequency shift keyed receiver is engaged to receive incoming signals for speeds above said predetermined speed threshold.

7. (CURRENTLY AMENDED) The system of ~~claim 5~~ claim 4, wherein said ~~signal indicative of said tire conditions includes an amplitude shift keyed wake up signal; said amplitude shift keyed wake up~~ single ~~initiating~~ initiates a switch from said amplitude shift keyed receiver to said frequency shift keyed receiver.

8. (ORIGINAL) The system of claim 1, wherein said transmitter sends said signal at predetermined intervals, said predetermined intervals varied in response to motor vehicle speed.

9. (ORIGINAL) The system of claim 1, wherein said predetermined interval is greater at speeds above said predetermined speed threshold than below said predetermined speed threshold.

10. (ORIGINAL) The system of claim 9, wherein said predetermined interval increases in response to variation of pressure within one of said tires.

11. (CURRENTLY AMENDED) The system of ~~claim 1~~ claim 4, wherein said ~~signal transmission~~ indicative of said tire conditions includes a plurality of data frames sent at random time intervals to prevent repeated overlap of transmissions from two or more of said sensor assemblies.

12. (CURRENTLY AMENDED) The system of claim 11, wherein said random time interval is transmitted to said receiver assembly such that said receiver assembly anticipates subsequent data frames of said transmission indicative of said tire condition signal.

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13. (ORIGINAL) The system of claim 12, wherein said amplitude shift keyed receiver is engaged during said random time interval.

14. (CURRENTLY AMENDED) ~~The system of claim 1, A system for monitoring conditions within a tire comprising:~~
~~a sensor assembly disposed within each tire of a motor vehicle,~~
~~a transmitter in communication with said sensor assembly to transmit a frequency shift keyed transmission indicative of current tire conditions;~~
~~a remote transmitter for actuating a remote keyless entry system, said remote transmitter emitting a amplitude shift keyed transmission to actuate a function of said keyless entry system;~~
~~a receiver assembly for receiving said frequency shift keyed transmission signal indicative of said current tire conditions and said amplitude shift keyed transmission signal to actuate a function from said remote transmitter, wherein said sensor assembly includes a valve stem pivotally mounted to said sensor assembly and lockable at a desired pivoted position such that said valve stem is disposed at an angle relative to said sensor assembly.~~

15. (ORIGINAL) The system of claim 1, wherein said sensor assembly includes a temperature sensor.

16. (ORIGINAL) The system of claim 1, wherein said sensor assembly includes an accelerometer.

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17. (CURRENTLY AMENDED) ~~The system of claim 1, A system for monitoring conditions within a tire comprising:~~
~~a sensor assembly disposed within each tire of a motor vehicle,~~
~~a transmitter in communication with said sensor assembly to transmit a frequency shift keyed transmission indicative of current tire conditions;~~
~~a remote transmitter for actuating a remote keyless entry system, said remote transmitter emitting a amplitude shift keyed transmission to actuate a function of said keyless entry system;~~
~~a receiver assembly for receiving said frequency shift keyed transmission signal indicative of said current tire conditions and said amplitude shift keyed transmission signal to actuate a function from said remote transmitter, wherein said receiver assembly includes a learning mode for discerning between signals from sensor assemblies disposed on other motor vehicles; said learning mode compares an acceleration value obtained from said sensor assembly with a vehicle acceleration value to distinguish between sensor assemblies disposed on another motor vehicle.~~

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18. (CURRENTLY AMENDED) ~~The system of claim 1, A system for monitoring conditions within a tire comprising:~~
~~a sensor assembly disposed within each tire of a motor vehicle.~~
~~a transmitter in communication with said sensor assembly to transmit a frequency shift keyed transmission indicative of current tire conditions:~~

~~a remote transmitter for actuating a remote keyless entry system, said remote transmitter emitting a amplitude shift keyed transmission to actuate a function of said keyless entry system;~~

~~a receiver assembly for receiving said frequency shift keyed transmission signal indicative of said current tire conditions and said amplitude shift keyed transmission signal to actuate a function from said remote transmitter, where said receiver assembly includes a localization mode for discerning the specific position of said sensor assembly the tire on the motor vehicle, said localization mode includes an external triggering source to initiate specific transmission from a specific sensor assembly associated with a specific location on said the motor vehicle.~~

19. (CURRENTLY AMENDED) A receiver assembly for receiving signals indicative of tire conditions for a tire pressure monitoring system and signals initiating activation of a specific function for a remote keyless entry system, said receiver assembly comprising;

an amplitude shift keyed receiver;

a frequency shift keyed receiver;

said receivers selectively engaged to receive incoming signals in response to a triggering event, wherein said frequency shift keyed receiver is engaged responsive to receiving an amplitude shift keyed wake-up signal from the tire pressure monitoring system.

20. (ORIGINAL) The assembly of claim 19, wherein said triggering event is a predetermined speed of the motor vehicle.

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21. (CURRENTLY AMENDED) The assembly of claim 19, wherein said tire pressure monitoring system includes a sensor assembly, said sensor assembly including a transmitter emitting ~~the~~ a signal indicative of tire conditions, said signal is a frequency shift keyed transmission.

22. (ORIGINAL) The assembly of claim 19, wherein said remote keyless entry system includes a remote transmitter, said remote transmitter emitting an amplitude shift keyed transmission.

23. (CURRENTLY AMENDED) The system of claim 19, wherein said amplitude shift keyed receiver is engaged to receive incoming signals for speeds below a predetermined speed threshold of said a motor vehicle and said frequency shift keyed receiver is engaged to receive incoming signals for speeds above said predetermined speed threshold.

24. (CURRENTLY AMENDED) The system of claim 23, wherein said tire monitoring system emits a single signal indicative of tire conditions and includes said an amplitude shift keyed wake up single signal, said amplitude shift keyed wake up signal initiating a switch from said amplitude shift keyed receiver to said frequency shift keyed receiver.

25. (CURRENTLY AMENDED) A method of determining a position of sensor assemblies for a tire pressure monitoring system of a motor vehicle comprising the steps of:

- a. transmitting a signal indicative of tire acceleration to a receiver assembly;
- b. obtaining data indicative of motor vehicle speed from a vehicle system;
- c. comparing the signal indicative of tire acceleration with the data indicative of motor vehicle acceleration; and
- d. recording the sensor assembly identification code in response to the signal indicative of tire acceleration being substantially equal to the data indicative of motor vehicle acceleration.

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26. (ORIGINAL) The method of claim 25, further including the step of relearning sensor assembly position in response to the motor vehicle remaining stationary for a predetermined period of time.

27. (ORIGINAL) The method of claim 25, further including the step of recognizing a new sensor assembly in response to receiving a desired number of data indicative of tire acceleration that compare favorably with the acceleration data indicative of the speed of the motor vehicle.

28. (CURRENTLY AMENDED) The method of claim 25, further including the step of obtaining data that ~~indicates that the motor vehicle is turning indicative of a turn of the motor vehicle from a vehicle system~~, and correlating the data indicative of a turn of the motor vehicle to indicate the position of the sensor assembly on the motor vehicle.

29. (ORIGINAL) The method of claim 25, further including the step of measuring signal strength to determine the position of said sensor assembly.

30. (CURRENTLY AMENDED) A method of preventing data transmission overlap between signals emitted from a tire pressure monitoring system and a remote keyless entry system, said method comprising the steps of;

a. setting a receiver assembly including an amplitude shift keyed receiver and a frequency shift keyed receiver such that incoming transmissions are received by said amplitude shift keyed receiver;

b. switching from said amplitude shift keyed receiver to said frequency shift receiver in response to a triggering event, ~~wherein said triggering event includes receiving an amplitude shift keyed wake-up signal from said tire pressure monitoring system.~~

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31. (ORIGINAL) The method of claim 30, further including the steps of emitting a frequency shift keyed transmission from said tire pressure monitoring system, and emitting an amplitude shift keyed transmission from said remote keyless entry system.

32. (ORIGINAL) The method of claim 30, wherein said triggering event is further defined as obtaining a vehicle speed above a predetermined threshold value.

33. (CURRENTLY AMENDED) The method of claim 30, wherein said trigger event is further defined as receiving an amplitude shift keyed wake up signal from the tire pressure monitoring system alerting ~~alerts~~ the receiver assembly ~~[[to]]~~ of a subsequent frequency shift keyed transmission.